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PRINCETON UNIVERSITY

EXERCISES AT THE UNVEILING OF A  
MEMORIAL TABLET

TO

ARNOLD GUYOT, PH.D., LL.D.,

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# **IN MEMORIAM**

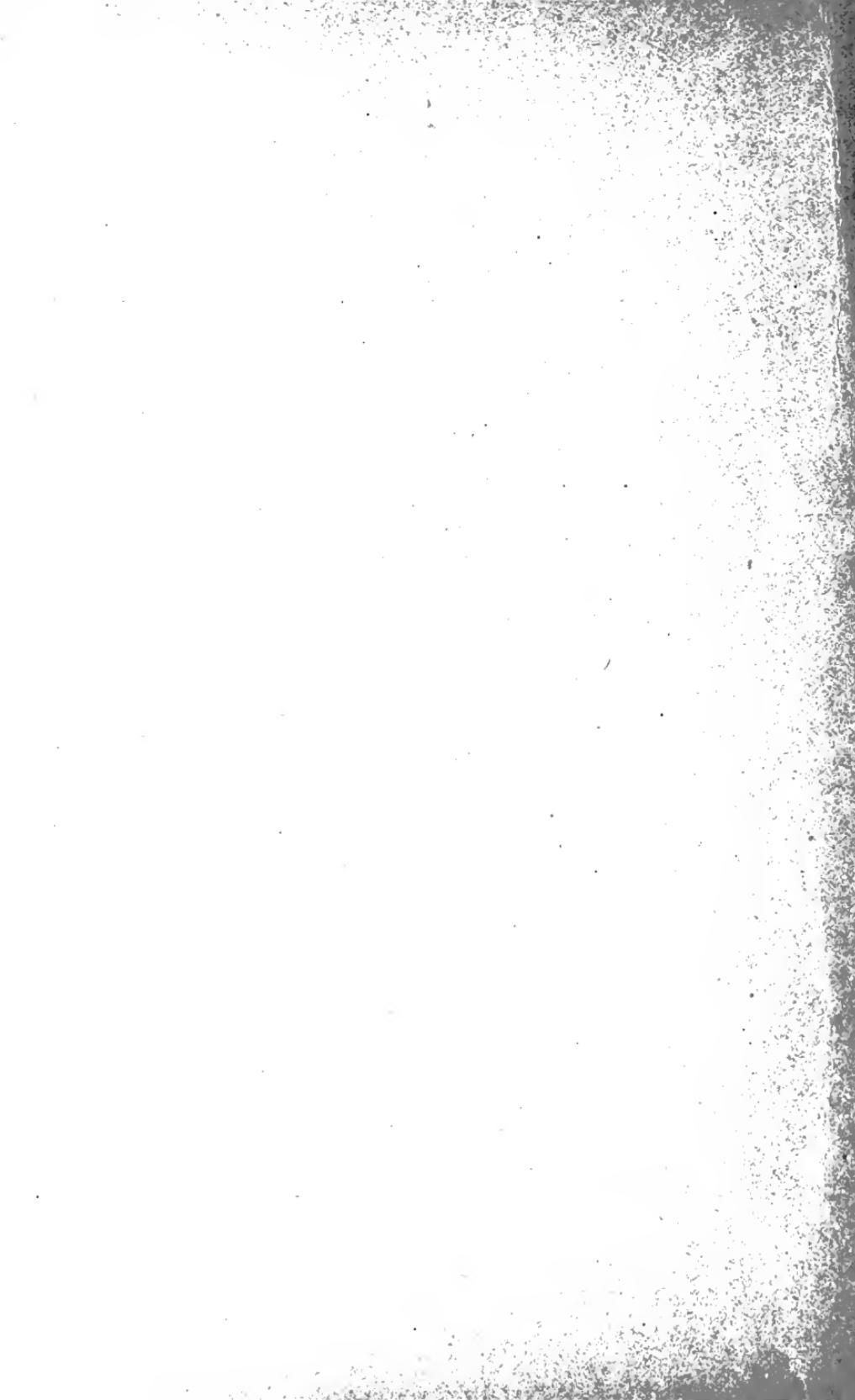
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**ARNOLD GUYOT, PH.D., LL.D.**

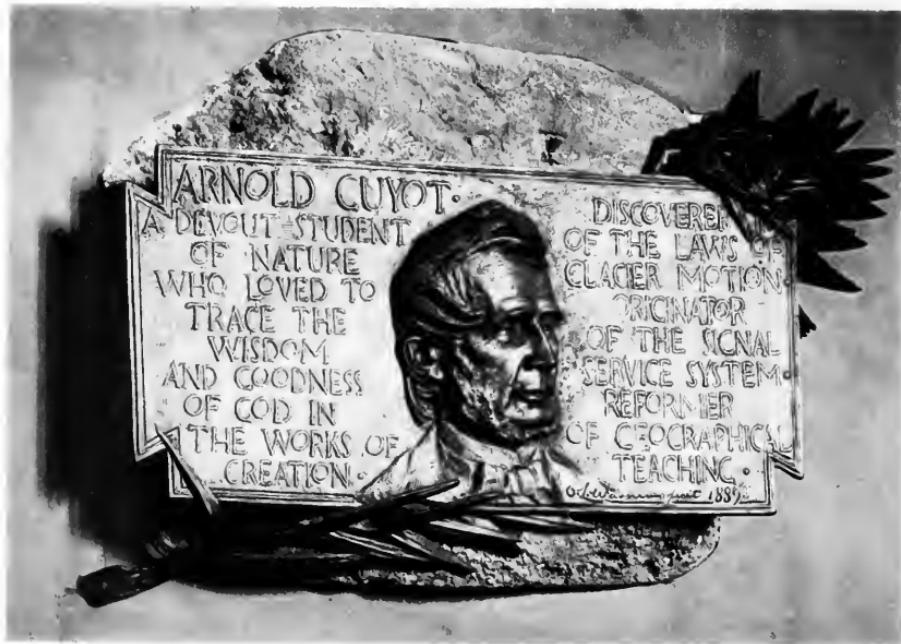
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**NEUCHATEL, SEPT. 28, 1807**

**PRINCETON, FEB. 8, 1884**







GUYOT MEMORIAL TABLET.

Princeton University

## EXERCISES

AT THE UNVEILING OF A

## MEMORIAL TABLET

TO

ARNOLD GUYOT, PH.D., LL.D.,

IN

MARQUAND CHAPEL,

PRINCETON, N. J.,

TUESDAY, JUNE 10TH, 1890.

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PRINCETON, N. J.,

C. S. ROBINSON & CO., UNIVERSITY PRINTERS.

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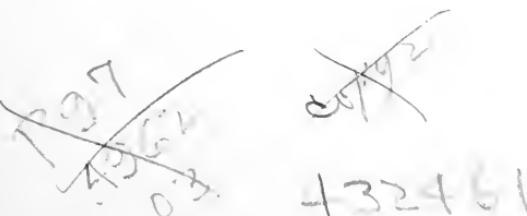
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Several years ago a circular letter was sent to the pupils of Dr. Guyot requesting their cooperation in placing a tablet to his memory in Marquand Chapel. At the same time it seemed appropriate that his older pupils across the ocean in Neuchâtel should be given an opportunity to join in the proposed plan. A letter was written to Mr. Charles Faure, Secretary of the Geographical Society of Geneva, and he was afterwards visited, with the view of securing an erratic boulder to form the basis of the tablet. Such a decided interest was taken in the matter that a law prohibiting the removal of these boulders was suspended and a large stone weighing some four or five tons was placed at our disposal. This rock was transported from the vicinity of Neuchâtel, the old home of Dr. Guyot, to New York. A portion weighing over half a ton was sawn from it, and imbedded in the Chapel wall. Upon this was placed a Roman tablet, resting on a palm branch, as will be seen in the plate.

A three-quarter bust of Dr. Guyot occupies the central portion of the tablet, and the inscription is to the right and left of the head.

The artistic execution of the tablet is the work of Mr. Olin L. Warner of New York City, who has given us an admirable likeness of Dr. Guyot.

The tablet was presented to the College by Prof. Libbey, at the request of the donors, and the exercises consisted of a short address of presentation, after which it was unveiled. The gift was received by President Patton who took the opportunity of speaking upon the life and character of Dr. Guyot. Both of the addresses are included in this pamphlet which is published at the request of the subscribers as a souvenir of the occasion.



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## PRESENTATION ADDRESS.

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MR. PRESIDENT, GENTLEMEN OF THE BOARD OF TRUSTEES, LADIES AND GENTLEMEN:—It is with the greatest pleasure that I come before you at this time as the representative of a number of the Alumni of this Institution, to present to the College a token of our high esteem for one whose name is dear to us all.

The name of Arnold Guyot for years attracted the widest attention of scientific men beyond these college walls. Among your students he was greatly respected as a teacher, and reverenced as a man. His kindly bearing and influence have been felt in many a life, and his fame lingers with us as a hallowing memory to be cherished most tenderly. It was here that he spent the best years of his life laboring for the benefit of young men, and to-day his pupils ask your acceptance of a lasting memorial of their affectionate regard for him.

We had expected to have with us on this occasion one who was his intimate friend, and one who could have told you most ably the story of his life and achievements. In this we have been disappointed, but the following letter received from Prof. Dana, explains his absence.

New Haven.

DEAR PROF. LIBBEY.

I feel that there is a kind of claim upon me for a duty—a speech of only a few words about my friend Guyot,—and I should not hesitate were I not, as regards health, wholly unfit for it. Can you not take the enclosed words and introduce them into your speech as my testimony to him;

“Besides his work as an educator and author, the two great features of Dr. Guyot’s scientific work were the discoveries upon which are based some of the most important of the views now accepted relating to glacier motion and structure; and his meteorological studies which served as the basis for the development of the United States Signal Service system.

In a paper read before the Geological Society of France, at a meeting at Porrentruy in September, 1838, he says “that from the examination of the glaciers of the Aar, Rhône, Gries, Brenva and others he learned, 1) the law of the moraines; 2) that of the more rapid flow of the center of the glacier than the sides; 3) that of the more rapid flow of the top than the bottom; 4) that of the laminated or ribboned structure; and 5) that of the movement of the glacier by a gradual molecular displacement, instead of by a sliding of the ice mass.”

The communication is mentioned in the Bulletin of the Society for 1838, (volume IX, page 407), but no report of it is given because the manuscript remained in his hands unfinished, in consequence of his protracted illness the winter following. The portion then finished (which was withheld from publication because, by special arrangement between them Agassiz in 1840 entered upon the special study of the glaciers, and Guyot upon that of the Swiss erratic phenomena, for their separate

parts of a general survey), has recently been printed in Volume XIII (1883) of the Bulletin of the Neuchâtel Society of Natural Sciences. In 1842 this manuscript was deposited by motion of Agassiz, in the archives of the Neuchâtel Society, and in 1848 it was withdrawn by Guyot when he left for America. It is to be regretted that publication was not substituted in 1842 for burial.

Guyot's communication of 1841, published in the *Altdorf Verhandlungen*, was drawn out by a discussion between Forbes and Agassiz relating to priority as to observations on the blue bands, and it was made just five days before Forbes' first letter was read in Edinburgh.

Agassiz claimed credit for Guyot at the meeting of the Royal Society of Edinburgh in 1841, as a set-off against Forbes' claim, and again in the *N. Phil. Journ.*, Vol. XXXIII, 265 (1842). Forbes in the following volume of the Journal XXXIV, 145 (1843) gives Guyot credit for original discovery as regards the "blue bands" and speaks of his corresponding with him on the subject; and he repeats the acknowledgment to the "ingenious professor of Neuchâtel in his Travels through the Alps of Savoy, 1843."

"An important portion of Guyot's meteorological labors consisted in the selection and establishment of meteorological stations. With this object in view, he made in 1849 and 1850, under the direction of the Regents of the University of New York, in conjunction with the Smithsonian Institution, a general orographic study of the State of New York, in order to ascertain the best locations for such stations. Thirty-eight stations were then located by him at points widely distributed over the State, and at the same time, patient, earnest Guyot, took pains to instruct observers at the stations

in the use of the meteorological instruments. Similar work was also done under like auspices in the State of Massachusetts."

The report of the Regents of the University of New York for 1851 contains the topographical results of the exploration giving an excellent sketch of the high plateaus and larger valleys of the State. Thus Guyot went almost immediately to work in his favorite fields, laying the foundations for geographical investigation, and for a national system of meteorological observations and records. The national plan was not then inaugurated; but the work thus carried forward under the Smithsonian Institution was the initiator, in fact, of our present system.

His Neuchâtel pupil, M. Faure, well observes: "He cared little for renown, but much for the study of nature, and for the education of man."

My academic memoir of Guyot closes with the following sentence: "As fellow-students, we have special reason to admire in Guyot—as he wrote of Humboldt—that ardent, devoted, disinterested love of nature, which seemed like a breath of life, to pervade all his acts; that deep feeling of reverence for truth, so manifest in him, which leaves no room for selfish motives in the pursuit of knowledge, and finds its highest reward in the possession of truth itself." I know this to be a just tribute. I loved him as I have loved no other man, found great delight and profit in his conversation, and inspiration in his exalting views of nature and of God's work in creation, and it is a great pleasure to me to know that there is soon to be at Princeton a tablet to his memory.

Yours sincerely,

JAMES D. DANA.

What more can be added to these words of the Nestor of American Geologists. Many of us have felt in some degree the benign influence, which produced such love in a kindred spirit.

[At this point the tablet was unveiled.]

My beloved Master, those of us who knew you face to face need no monument to recall your memory, but we will place this boulder, the gift of students, from your Swiss home, and a fitting memento of your early scientific work, here in the most sacred spot in the scene of your labors for us, and we will leave upon it inscribed in immortal bronze, the representation of your features and a record of your services to mankind; to become a source of inspiration to future generations of students, as they have been to us in the past.

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The following message has been received from Switzerland:

“The old students of Neuchâtel unite with those of Princeton in this tribute to their beloved and revered Professor, Arnold Guyot, whose memory the monument in the College Chapel is destined to perpetuate.”

## PRESIDENT PATTON'S ADDRESS.

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MY DEAR DR. LIBBEY: I am glad to receive this beautiful gift, and in behalf of the Trustees of the College I thank you most heartily for it. I am glad to receive it from you, partly because I know that it is chiefly through your enthusiastic devotion to the memory of a beloved teacher that we are thus enabled to bear permanent testimony to our reverence for one who so adorned his station and is so closely identified with the history of this College; and partly also because I recognize you as at once the successor of Dr. Guyot in one of the subjects to which he gave his life and as one of the foremost representatives in this land of the department of Physical Geography. I am glad to have this tablet placed near the one that is saered to the memory of Professor Henry in order that the two names that stand side by side in the scientific fame of Princeton may also stand side by side in the monuments that keep them in loving remembrance. And I am glad that both of these tablets have been placed in this sacred edifice not only as befitting the obligations of filial piety, but also and chiefly because the men whose memory they perpetuate were no less great in their simple Christian faith than in their lofty scientific stature.

LADIES AND GENTLEMEN,—I wish that it were our privilege now to hear from one who by reason of his scientific eminence and his intimate friendship with

Dr. Guyot would have given special dignity and impressiveness to this occasion. It is only the fact that Dr. Dana was unable to be present and the accident of my official position that can give even the semblance of propriety to anything that I may say.

I need not recite the story of Professor Guyot's life. To most of us it is as familiar as it was uneventful. It had marked characteristics however, and is suggestive of important lessons. Dr. Guyot was a native of Switzerland. The cosmopolitan character of our American life asserts itself nowhere more distinctly than in our generous disregard of national boundary-lines in all matters that pertain to the higher spheres of thought. We think that the best the world can give is none too good for us and we help ourselves to it without stint wherever we can find it. In this way it came to pass that Agassiz spent his days in one great American university and Guyot, his fellow-countryman, in another.

It is a law in Physics, I believe, though I do not trust myself to be too technical in talking about it, that matter when it disappears in one place is sure to turn up in another. Disappearance is never loss when we consider the totality of things. This law holds good in the sphere of thought as well. The citizens of Neuchâtel lost their university in the Revolution of 1848; but their loss was our gain, was in fact the gain of the world; for, as the transplanting process sometimes helps the tree, so Guyot of Princeton, I make bold to say, became a greater man than Guyot of Switzerland ever would have been.

Dr. Guyot was a student. He cared less for fame than for knowledge, and less for money than for either. He belonged to that haughty aristocracy of intellect whose glory it is to despise pelf and whose motto is

plain living and high thinking. In the simplicity of his life he reminds me of Spinoza who ground lenses for a living rather than sacrifice his intellectual independence. In his contented life in Princeton he reminds me of Kant who lived and thought through his eighty years in a little university town, and whose ambition never took him far beyond the limits of Königsberg. I sometimes think, however, fellow-craftsmen, when I find men haggling over the market value of their wares, that our guild is forsaking its traditions, and that like the English aristocracy of another sort, it is going into trade. Quest of truth is our high calling: there is none higher save that of imparting it to others, and that is ours too. The simple epitaph which reads, "Louis Agassiz, Teacher," is therefore after all perhaps not quite so modest as it seems. It is heraldic of a high nobility. Guyot belonged to that nobility.

Dr. Guyot was a broad scholar. He had special tastes, but he was broadly educated. He was in some respects like Leibnitz, of whom it has been said that he drove all the sciences like so many horses abreast. He was not a mere specialist. His special knowledge was glorified by his varied culture. He impressed us with his great wealth of acquisition and his reserve power, and in this respect was so unlike some in these days whose specialism makes them intellectually lean and who are forever "dropping buckets into empty wells and growing old in drawing nothing up." He was especially acquainted with the two departments that are indicated in the title of his greatest book, "Earth and Man." He was familiar with the history of material order in the co-existences and successions of physical phenomena on this planet; he knew the history of moral order in the displacements and changes that have

taken place in human society; and he unified the two under a great theistic conception.

Dr. Guyot was preëminently a man of science. He believed in induction and was not afraid of investigation. He spared no pains, and was indefatigable in labor. "It cost me much thought," said Descartes once when speaking of his philosophy of knowledge. We may well believe him. The insights and inspirations of which we read come generally as the result of close application and hard work. It is not the casual visitor, it is not the desultory reader in the great library of knowledge; it is the habitual student, the man who lives behind his favorite alcoves and in intimate communion with truth herself to whom the soft-voiced custodian of the treasures of all knowledge imparts those visions that mark epochs in the world of Thought.

The man of whom we speak was also a philosopher. I do not mean that he was a metaphysician, or that he was a professed student of philosophy as that word is commonly understood. I mean that he had the temper of a philosopher, that his thinking went to the roots of things, and that he saw truths in their organic relations. There are men of analysis and men of synthesis. There are men who carry bricks up a ladder, and there are architects. Guyot was an architect. They are master-minds, path-breaking men, men who lead, even though it be true that those who follow them have sometimes more accurate knowledge and greater mastery of detail. Augustine was such a man; Calvin was; Newton and Kant and Darwin belong to this category, and to this class also in the sphere of Physical Geography belongs Arnold Guyot.

Like Raymond de Sebonde, Dr. Guyot believed that God had given us two books, and that they are in full

accord with one another. *Liber Creaturarum* helped him to understand the meaning of *Liber Scripturarum*. He had no disposition to minimize the supernatural or deny the possibility of miracles. He saw in the Mosaic cosmogony a set of categories spacious enough to hold all the results of scientific investigation, and the more he read it the more convinced he was on scientific grounds of the inspired insight of its author.

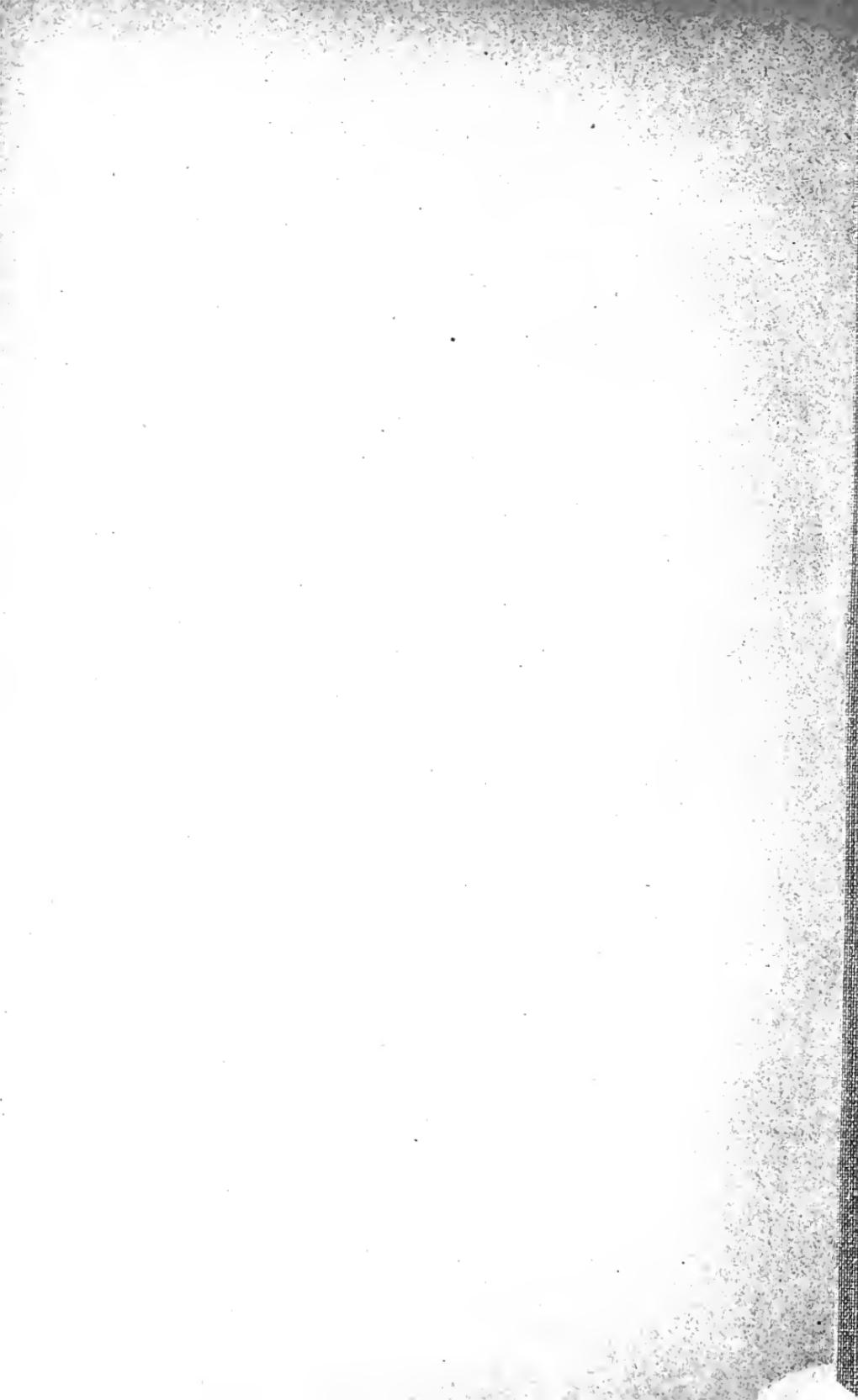
Dr. Guyot, as I have indicated, was in intellectual sympathy with the truths of revealed religion. But more than that, he was a religious man. He illustrated, as few men do, the truth so finely taught by Principal Shairp, that true culture culminates in devotion. Dr. Guyot was a man of humble faith in God. Simple as a child, he lived in communion with Christ. Yet, he did not succeed in keeping his faith by effecting a divorce between his intellect and his emotions. He did not give his heart to religion and save his intellect for science. He was fond of dwelling upon religious themes. It was indeed the religious side of science that delighted him. Referring to some of his scientific expeditions, first in Switzerland and towards the close of his life in the Catskills, Professor Dana remarks that Dr. Guyot's scientific work was for the most part mountain work. It was indeed that in more senses than one. He lived on high levels of thought. His eye ever swept a wide horizon. And when the end came, he went up Moses-like, to the mountain-top to die. In his last moments he watched in thought the splendid panorama of "creation," and writing with his dying hand for us what one has called his literary last will and testament, he closed his eyes and was not, for God took him.

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